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CLAIMS

1. A dew-point cooler comprising a heat exchange element, the dew-point cooler operating in counter flow wherein a product air stream flows over a first side of the heat exchange element and is cooled by heat transfer to the element and wherein a portion of the product air stream is diverted back over a second side of the heat exchange element, the second side of the heat exchange element being provided with a supply of water whereby heat transfer from the heat exchange element to the water causes it to evaporate into the air stream, wherein the heat exchange element comprises a membrane and a formed heat exchange laminate attached to the membrane, the formed heat exchange laminate comprising a formable carrier layer at least partially covered with a flexible liquid retaining layer having an open structure such that in use, a heat exchange medium can directly contact the carrier layer through the open structure of the liquid retaining layer.
2. The dew-point cooler according to claim 1, wherein the liquid retaining layer is a fibrous material and the open structure comprises spaces between the fibres.
3. The dew-point cooler according to claim 2, wherein the fibrous material is adhered to the carrier layer by an adhesive.
4. The dew-point cooler according to claim 3, wherein the fibrous material comprises a bonded mixture of polyester and viscose fibres.
5. The dew-point cooler according to claim 3, wherein the fibrous material comprises a woven or knitted fibrous layer.
6. The dew-point cooler according to any preceding claim wherein the carrier layer comprises aluminium.
7. The dew-point cooler according to any preceding claim wherein the liquid retaining layer has an average thickness of less than 50 microns.

8. The dew-point cooler according to any preceding claim, wherein the heat exchange laminate is corrugated to form a series of elongate fins.
9. The dew-point cooler according to claim 8 wherein the elongate fins are wave shaped in their elongate direction.
- 5 10. The dew-point cooler according to any preceding claim , wherein the fins are provided with louvres.
11. The dew-point cooler according to any preceding claim, wherein the liquid retaining layer is provided substantially only on a first side of the carrier layer.
12. The dew-point cooler according to any preceding claim wherein the formed heat
10 exchange laminate is attached to the membrane by adhesive.
13. The dew-point cooler according to claim 12 wherein the adhesive is a heat actuated adhesive applied to the carrier layer or the membrane.
14. The dew-point cooler according to any any preceding claim wherein the membrane is formed into a tubular structure.
- 15 15. The dew-point cooler according to any preceding claim, wherein the membrane also comprises a heat exchange laminate according to any of claims 1 to 7
16. A method of manufacturing a dew-point cooler comprising:
 providing a heat exchange laminate comprising a formable carrier layer at least
 partially covered with a flexible liquid retaining layer having an open structure;
20 forming the laminate into a plurality of elongate fins; and
 attaching the fins to a first surface of a membrane for heat transfer thereto to form
 a heat exchange element.
17. The method according to claim 16 further comprising forming louvres in the fins.
18. The method according to claim 16 further comprising attaching further fins to a
25 second surface of the membrane for heat transfer thereto.

19. The method according to claim 18 further comprising folding the membrane to form a tubular structure with the elongate fins on an exterior surface of the tubular structure and the further fins on an internal surface of the tubular structure.